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REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicants respectfully submit that the pending claims comply with 35 U.S.C. § 112 and are not rendered obvious under 35 U.S.C. § 103.

Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicants respectfully request that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.

The applicants will now address each of the issues raised in the outstanding Office Action.

Rejections under 35 U.S.C. § 112

Claims 19-22, 24-26 and 28-32 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. Specifically, the Examiner contends that the written description of the specification fails to disclose the corresponding structure, material, or acts for the claimed function of "auxiliary image creating means". The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Independent claim 19 has been amended to recite "guide image creating circuit" instead of "auxiliary image creating means." Moreover, the written description of the specification clearly describes exemplary structure of the "guide image creating circuit" with reference to element 141 (guide image creating means) of Figures 20, 33 and 36. (See also Figures 24 and 27.) See, for example, the description of element 141 on pages 64, 65, 68-74 and 78-91.

Thus, the applicants submit that the claims comply with 35 U.S.C. § 112 and respectfully request that the Examiner withdraw this ground of rejection.

Rejections under 35 U.S.C. § 103

Claims 19-22, 24-26 and 28-32 stand rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent Application Publication No. 2002/0049375 ("the Strommer publication"), and further in view of U.S. Patent No. 6,108,439 ("the Ishiguro patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Independent claim 19, as amended, is patentable over the Strommer publication in view of the Ishiguro patent because these references, either taken alone or in combination, neither teach, nor make obvious, a combination of an ultrasonic diagnostic apparatus comprising a guide image creating circuit for creating, during radial scanning by the ultrasonic transducer, an auxiliary image including a plurality of two-dimensional

anisotropic ultrasonic image markers arranged along the movement path of the ultrasonic transducer, each of the markers expressing a position and orientation in three-dimensional space of a scan plane of the ultrasonic transducer when the tomographic image is obtained, wherein the guide image creating circuit further makes a display form of the ultrasonic image marker corresponding to the tomographic image displayed for comparisor among the plural ultrasonic image markers different from a display form of the other ultrasonic image markers, and wherein the guide image creating circuit again creates an auxiliary image such that the ultrasonic image marker at a position where the one tomographic image was obtained and the ultrasonic image markers other than the ultrasonic image marker at the position where the one tomographic image was obtained are displayed in different display forms, in conjunction with the selecting of the one tomographic image by the input means after the radial scanning by the ultrasonic transducer. That is, claim 19, as amended is characterized in that, in conjunction with the selecting of one tomographic image, after the radial scanning (by input means capable of selecting and indicating one tomographic image), which selected one tomographic image is to be displayed together with the auxiliary image from among the plural tomographic images recorded in the recording means, an auxiliary image is again created such that the ultrasonic image marker at a position where the one tomographic image was obtained and the ultrasonic image markers other than the ultrasonic image marker at the position where the one tomographic images was obtained are displayed in different display forms.

Embodiments consistent with amended claim 19 can advantageously create a display screen enabling the operator to easily recognize, at a glance, that the ultrasonic images are sequentially updated and that ultrasonic image markers in distinct display forms are sequentially linked to the positions of adjacent ultrasonic image markers. First, this feature allows the operator to easily recognize at which locations the recorded ultrasonic images were recorded. above feature also allows the operator to easily recognize how internal organs and vessels are connected along the movement trajectory of the endoscope insert Third, the above feature further allows a number of tomographic images to be recorded, and the recorded images to be later read and displayed in a manner that allows an operator to easily recognize at which locations of the path the current tomographic images were captured when searching for a diseased part (while switching through and displaying the plural tomographic images).

In contrast, the Strommer publication and the Ishiguro patent do not disclose the foregoing features of claim 19, as amended, and consequently lack the advantageous operations and effects described above. Therefore, regardless of the presence or absence of an obvious reason to combine the references as proposed by the Examiner, the features of amended claim 19 are patentable over a combination of the Strommer publication and the Ishiguro patent.

In addition, dependent claim 26, as amended, discloses a feature to create a direction marker that

allows easy recognition of the correlation between the specific direction of the ultrasonic marker and the specific direction of the tomographic image corresponding to the ultrasonic marker. By providing such a direction marker, embodiments consistent with the claimed invention allow the operator to easily recognize the direction of a current scan during radial scanning with the ultrasonic transducer (during operation).

The Examiner concedes that the Strommer publication does not teach directional image markers. However, to compensate for this deficiency, the Examiner relies on the Ishiguro patent, contending that the Ishiguro patent teaches marker means which are necessary for generating a 3D ultrasound image. (See Paper No. 20090803, page 4.) The applicants respectfully submit that the alleged teaching of the Ishiguro patent is insufficient to compensate for the deficiencies of the Strommer publication with reference to claim 26, as amended.

In contrast to amended claim 26, the marker recited in the Ishiguro patent is for merely distinguishing between an image necessary to create a three dimensional image and other images. In other words, this marker is created to provide an operation and effect different from those of the direction marker recited in the amended claim 26. Specifically, the Ishiguro patent merely discloses an ultrasound transducer capturing a series of 2D ultrasound images while it is being moved in a direction perpendicular to the planes of 2D ultrasound scans. In this way, the Ishiguro patent obtains a large number of sequential 2D ultrasound images for use as picture data in generating and displaying a 3D ultrasound image wherein certain 2D images necessary for 3D image

generation are marked with a marker signal by a marker means before 3D image processing. (See, e.g., Figs. 4 and 9, the Abstract, and col. 5, lines 8-67 of the Ishiguro patent.) Nowhere does the Ishiguro patent teach or make obvious "a guide image creating circuit superimposes on the ultrasonic image marker a direction marker indicating a specific direction of a tomographic image corresponding to the ultrasonic image marker." Therefore, claim 26, as amended, is patentable over the Strommer publication and the Ishiguro patent for at least this additional reason.

Accordingly, independent claim 19, as amended, is patentable over the Strommer publication in view of the Ishiguro patent for at least the foregoing reasors. Since claims 22-27 and 29-32 directly or indirectly depend from independent claim 19, these claims are similarly patentable over the Strommer publication in view of the Ishiguro patent.

Conclusion

In view of the foregoing amendments and remarks, the applicants respectfully submit that the pending claims are in condition for allowance. Accordingly, the applicants request that the Examiner pass this application to issue.

Any arguments made in this amendment pertain only to the specific aspects of the invention claimed. Any claim amendments or cancellations, and any arguments, are made without prejudice to, or disclaimer of, the applicants' right to seek patent protection of any unclaimed (e.g., narrower, broader, different) subject matter, such as by

way of a continuation or divisional patent application for example.

Since the applicants' remarks, amendments, and/or filings with respect to the Examiner's objections and/or rejections are sufficient to overcome these objections and/or rejections, the applicants' silence as to assertions by the Examiner in the Office Action and/or to certain facts or conclusions that may be implied by objections and/or rejections in the Office Action (such as, for example, whether a reference constitutes prior art, whether references have been properly combined or modified, whether dependent claims are separately patentable, etc.) is not a concession by the applicants that such assertions and/or implications are accurate, and that all requirements for an objection and/our a rejection have been met. Thus, the applicants reserve the right to analyze and dispute any such assert ons and implications in the future.

Respectfully submitted,

November 4, 2009

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper (and any accompanying paper(s)) is being facsimile transmitted to the United States Patent Office on the date shown below.

John C. Pokotylo

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